

### Sexually Transmitted Diseases (STDs)

Wyoming Department of Health
Communicable Diseases
307-777-8939

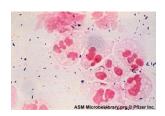
# Wyoming Department of Health Commit to your health.

#### STDs

- •STDs are transmitted through all forms of unprotected sex:
  - •Oral
  - Vaginal
  - •Anal
- •Some STDs can be transmitted through blood to blood contact and from mother to child
- •More than **\$6 billion** is spent each year to diagnose and treat STDs and their complications-not including HIV
- •1 in 2 sexually active individuals will get an STD by age 25, most won't know it...
- •Under 50% of adults age 18-44 have ever been tested for an STD other than HIV

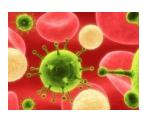


### **STDs**



#### **Bacterial**

- ${}^{\bullet}Chlamydia$
- ${}^{\bullet}Gonorrhea$ 
  - $\bullet$ Syphilis



#### <u>Viral</u>

- •Viral Hepatitis
- •Genital Herpes
  - $^{\bullet}HPV$
  - •HIV/AIDS



#### **Other**

- •Trichomoniasis
  - •Pubic Lice

ullet This presentation will focus on all reportable STD infections

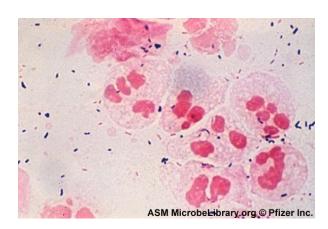


# Chlamydia



# What is Chlamydia?

- •A bacterial infection caused by *Chlamydia trachomatis*
- •It is transmitted through unprotected sex:
  - •Oral
  - •Anal
  - Vaginal
- •Incubation period is 7-21 days
- •Re-infection is common
- •Highly Transmissible
- •Can also infect the eyes
- •Can be transmitted from a mother to an infant during delivery causing an eye infection called Ophthalmic Chlamydia, and some forms of pneumonia
  - •Mother to child transmission results in conjunctivitis for 30%-50% of exposed babies





# Symptoms

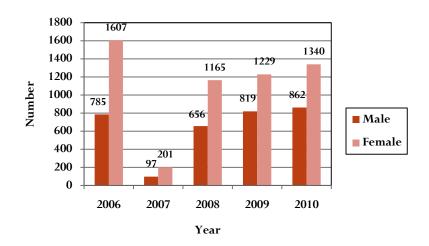
- •75% of women and 50% of men do not show any symptoms!
- •Symptoms may include:
  - •Discharge
  - •Painful Urination
  - •Abdominal Pain
  - Pain During Sex
  - •Pelvic Pain
  - •And more...

- •If untreated Chlamydia can lead to:
  - •Pelvic Inflammatory Disease (PID)
  - Infertility
  - Ectopic Pregnancy
  - •Urethritis
  - •Epididymitis
  - Perihepatitis
  - •Reiter's syndrome



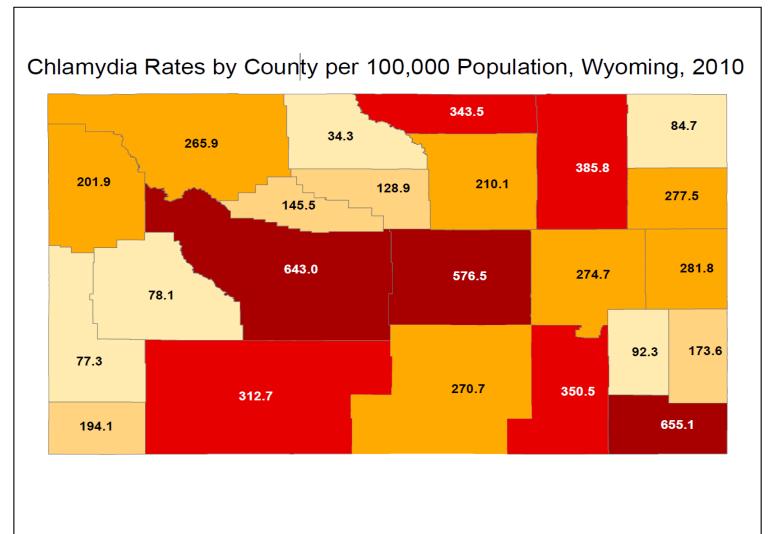
### **Statistics**

- •Chlamydia is Wyoming's most prevalent reportable infection
- •The majority of cases are in individuals aged 15-24 years
- •Women account for more cases than men because screening is targeted at females
- ${}^{ullet}$ Though Wyoming is the 50th state in terms of population, WY has the 26th highest rate of chlamydia in the US!
- •In 2010, 2202 cases of Chlamydia were reported in the state of Wyoming.
  - •The number of Chlamydia cases has been increasing since 2007





#### **Statistics**





# Screening Recommendations

- •All sexually active women under age 25
- •Women age 25 and older with one or more of the following:
  - •New sex partner in the last 60 days.
  - •Multiple sex partners in the last 60 days.
  - •MPC
  - Cervical friability
  - •PID
  - •Positive for chlamydia in the last 12 months



#### Prevention

- ullet The only way to protect against any STD 100% is abstinence
- •Condoms
- •Female Condoms
- Dental Dams
- ulletReducing the number of sex partners
- •Knowing your partner's status
- •Knowing your own status for all STDs
- •Prevention materials can be found free of charge at family planning clinics and public health nursing offices.







- Testing
  - •Culture
  - •Non-culture
    - •Nucleic Acid Amplification Tests (NAATs)\*
      - Detect DNA or RNA of specific organism
      - •Significantly more sensitive than cultures
- •NAAT Tests are FDA recommended to be performed with:
  - •Urine sample
  - •Vaginal swab (self-collected or collected by a provider)
- •Testing can be performed at:
  - •Family Planning Clinics
  - •Public Health Nursing Offices
  - •STD Clinics
  - •Private Physicians' Office
  - •Hospitals
- •Chlamydia test results are often available within a few days



#### Treatment

- •Chlamydia is treated with antibiotics
  - •Azithromycin- recommended
    - •1 g orally, single dose
  - Doxycycline
  - •Amoxicillin
- •For the 2010Treatment guidelines go to <a href="http://www.cdc.gov/std/treatment/">http://www.cdc.gov/std/treatment/</a>
- •Sexual Partners are encouraged to get tested
- •EPT:
  - •Is a method of prevention in which the infected patient is given medication to give to the sexual partners
  - •Has been established as an effective means of treating partners who would otherwise not seek testing/treatment
  - •Is a recommended practice of the CDC
  - •For more information on EPT visit <a href="http://www.cdc.gov/std/ept/">http://www.cdc.gov/std/ept/</a>







- •Repeat testing is recommended for:
  - •Non-pregnant women
    - •Non-compliance
    - •Suspect re-infection
    - •Symptoms remain
    - •3-4 months after treatment
    - •Re-infection can increase the risk of PID
  - •Pregnant women
    - •Re-test 3 weeks after medication is completed





# Reporting

- •Chlamydia is reportable in the state of Wyoming within 24 hours of diagnosis by **both** 
  - •The laboratory
  - •The provider
- •Providers are encouraged to utilize **PRISM** for reporting
  - •PRISM- a data system used to store, analyze, and track STD data
  - •For more information contact Julie Tarbuck at 307-777-7953 or julie.tarbuck@wyo.gov
- •If the use of PRISM is not feasible, providers should report using the ECDR
  - •https://prismdata.health.wyo.gov/





# Gonorrhea



### What is Gonorrhea?

A bacterial infection caused by Neisseria gonorrhoeae

- •It is transmitted through unprotected sex:
  - •Oral
  - Anal
  - •Vaginal
- •Can also infect the eyes (Gonococcal Ophthalmia)
- •Can be transmitted from a mother to an infant during delivery causing an eye infection that can lead to blindness
- •Gonorrhea infection has been associated with an increased susceptibility to and increased risk of transmission of HIV
- •Some strands are <u>drug-resistant</u>
  - •20% of isolates are resistant to penicillin, tetracycline, or both
  - •3% of isolates have decreased susceptibility to azithromycin



# Symptoms

Symptoms for gonorrhea tend to be more severe than chlamydia, though many women can be asymptomatic.

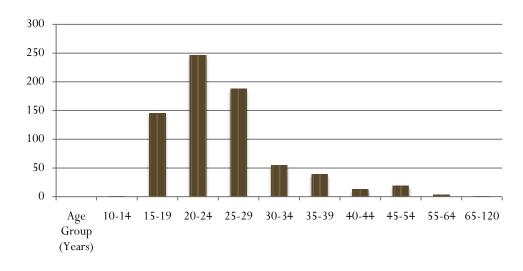
- •Symptoms include:
  - •Greenish-colored discharge
  - •Odor
  - •Penile Pain
  - Pain during urination
  - •Pain during sex
  - •Swollen testicles
- •If untreated gonorrhea can lead to:
  - •Pelvic Inflammatory Disease (PID)
  - •Infertility
  - •Epididymitis



#### **Statistics**

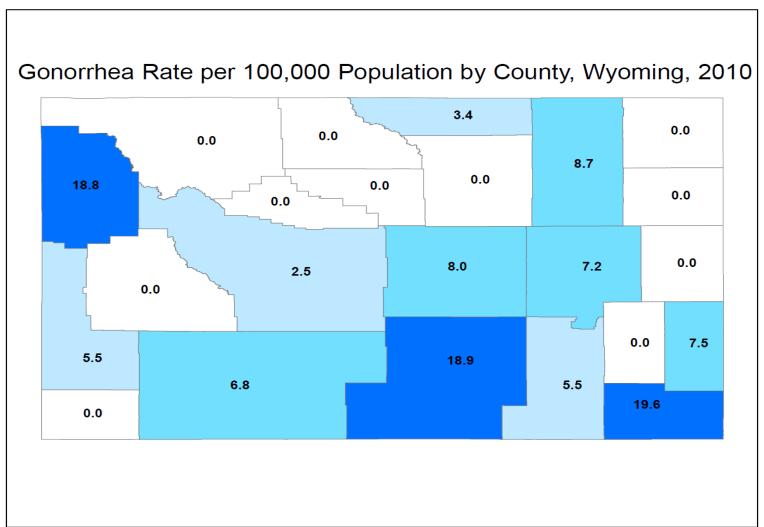
Individuals aged 15-29 accounted for most gonorrhea cases in Wyoming from 2005-2010.

#### Gonorrhea Cases by Age Group, Wyoming, 2005-2010





#### Statistics







- •All sexually active women under age 25
- •Women age 25 and older with one or more of the following:
  - •New sex partner in the last 60 days.
  - •Multiple sex partners in the last 60 days.
  - •MPC
  - Cervical friability
  - •PID
  - •Positive for gonorrhea in the last 12 months





#### Prevention

- •The only way to protect against any STD 100% is abstinence
- •Condoms
- •Female Condoms
- Dental Dams
- •Reducing the number of sex partners
- •Knowing your partner's status
- •Knowing your own status for all STDs
- •Prevention materials can be found free of charge at Family Planning Clinics and Public Health Nursing offices.





# Testing

- •Getting tested for gonorrhea is the only way to know your patient's status for sure
- •Tests can be performed using by NAAT with:
  - •Urine sample
  - •Vaginal swab (self-collected or collected by a provider)
- •Testing can be performed at:
  - •Family Planning Clinics
  - •Public Health Nursing Offices
  - •STD Clinics
  - •Private Physicians' Office
  - •Hospitals
- •Gonorrhea test results are often available within a few days





## Drug-Resistant Gonorrhea

- •Drug-resistant gonorrhea infection is a growing public health concern
- •In an effort to prevent drug-resistant gonorrhea, dual therapy is recommended for treatment
- •Treatment of gonorrhea relies on the effectiveness of antibiotics
- •If treatment for gonorrhea infection fails, it should be reported to Wyoming Department of Health
- •Gonorrhea <u>cultures</u> should be done in the event a drug-resistant strain is suspected or any anyone with persisting symptoms after being treated with the recommended medications.





#### Treatment

- •Gonorrhea can be cured by a dual antibiotic therapy of ceftriaxone 250mg IM and 1g of azithromycin or doxycycline 100mg bid for 7 days
- •It is important the patient abstains from sex while taking the medication and for 7 days after completing the medication
- •In some cases, expedited partner therapy (EPT) can be used to treat sexual partners who would otherwise not seek care (cefixime 400 mg and azithromycin 1 g orally)
- •If symptoms persist or re-infection is suspected, a re-test should be done 3 months after treatment





# Reporting

- •Gonorrhea must be reported to the Wyoming Department of health within 24 hours of diagnosis by **both** of the following:
  - Laboratories
  - Providers
- •Providers are encouraged to utilize **PRISM** for reporting
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# Syphilis





- •A bacterial infection caused by *Treponema pallidum*
- •Transmitted through unprotected:
  - •Anal Sex
  - •Oral Sex
  - •Vaginal Sex
  - •Mother to child during childbirth
- •Can also be transmitted through skin to skin contact!
- •Multiple Stages
  - Primary
  - •Secondary-results from untreated primary
  - •Late/Latent-results from untreated infection





# Symptoms

- Primary Syphilis
  - •A single Chancre that appears 10-90 days after infection
    - Painless
    - •May be hard to see (on the vaginal wall, in the mouth)
    - •Lasts for 3-6 weeks
    - •Heals without treatment
- Secondary Syphilis
  - •Rash on the palms of the hands or bottoms of the feet
    - •Rash is typically red or reddish-brown and rough
    - •Can be faint and not noticed
    - •Can develop while the chancre is healing or several weeks after
    - •Does not itch
  - •Fever, headache, swollen glands, sore throat, and patchy hair loss
- •Latent Syphilis
  - •Can last for years
  - •Occurs in 15% of people with untreated primary and secondary syphilis infections
  - •Difficulty coordinating muscle movement, dementia, paralysis & blindness
  - •Causes damage to organs such as the brain, eyes, heart, bones & joints





### **Statistics**

- •In the US, 13,997 cases of Syphilis were reported corresponding to a case rate of 4.6 cases per 100,000 population.
- In 2009 the rate of Syphilis in Wyoming was 0.6 per 100,000 population<sup>4</sup>.





# Screening Recommendations

- •Testing is recommended for
  - •Any individual who is symptomatic
  - •All pregnant women
  - •All individuals who are at increased risk of syphilis infection
- •Routine screening is not recommended for asymptomatic individuals who are not at increased risk of infection





#### Prevention

- •Condoms- when they cover the affected area
  - ullet If the condom does not cover the affected area (chancre) it is best to not engage in sex
- •Know your partner
  - •If you believe your partner may be infected, do not engage in sex
- •Check for any sores or chancres in the mouth, anus, vagina, or on the genitals
- •If you believe you may have been infected or have symptoms, get tested





# Testing

- •Blood Tests
  - •RPR (Rapid Plasma Reagin)-will need a confirmation
  - •EIA (Enzyme Immuno Assay) -confirmatory test
- Possible scenarios
  - <u>Positive RPR</u>, <u>Negative EIA</u>-Patient is most likely not infected
  - Positive RPR, Positive EIA Patient is infected
  - <u>Negative RPR</u>, <u>Negative EIA</u>-Patient is not infected (can't rule out recent infection)
  - <u>Negative RPR, Positive EIA</u>-Patient has previously been infected and treated
- •All individuals who are positive for syphilis should be tested for HIV







- •A shot of penicillin for individuals with syphilis for less than 1 year
- •Additional doses for individuals with syphilis for more than 1 year
- •Other antibiotics can be used for individuals who are allergic to penicillin





# Reporting

- •Syphilis is a reportable disease in Wyoming in which the following have to report within 24 hours of diagnosis:
  - Laboratories
  - Physicians
- •Providers are encouraged to utilize **PRISM** for reporting
  - •PRISM- a data system used to store, analyze, and track STD data
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# Other STDs



### Other STDs

#### **Genital Herpes**:

- •Caused by Herpes Simplex Virus 1 or 2
- •There is no cure for genital herpes
- •Symptoms:
  - •Sores or blisters around the genitals or rectum that last 2-4 weeks
  - •No symptoms if there is no current outbreak
  - •Typically, an infected individual will have 4 to 5 outbreaks a year
- •1 out of 6 individuals aged 14-49 is estimated to have genital herpes
- Testing/Diagnosis
  - •Genital herpes can be detected through visual examination and swab of the sores/blisters
  - •Blood tests can be use if there is no current outbreak
- Treatment
  - •Antiviral medications can help reduce the number and lengthen the duration of outbreaks
- Prevention
  - •Correct and consistent condom use when no sores are present
  - •When sores are present, do not engage in sex
  - •Antivirals may also help reduce transmission of the virus to partners
- •Genital Herpes is <u>not</u> a reportable condition in Wyoming.





#### **Human Papillomavirus (HPV)**

- •Most common STD in the US
- •More than 40 different variations of the virus
- Symptoms:
  - •No symptoms
  - •Genital Warts
  - •Warts in the throat
  - •Cancer of the Cervix, Vulva, Vagina, Penis, Anus and Oropharynx
- •50% of sexually active men and women will get HPV at least once in their lifetime
- •Testing/Diagnosis
  - •There is not standard test for HPV in men or women
  - •HPV can be detected through an abnormal or atypical pap smear
- Treatment
  - •There is not treatment for the virus
  - •Treatments are provided for the diseases HPV can cause
- Prevention
  - Consistent and Correct condom use
- Vaccination
  - •Gardasil is recommended for all women AND men age 9-26 and protects against 4 strains of HPV that cause the majority of cervical cancers and genital warts
- •HPV is <u>not</u> a reportable disease in Wyoming





#### Other STDs

#### **Trichomoniasis**

- •A curable infection caused by a single-celled protozoan parasite called *Trichomonas vaginalis*
- •Most commonly found in the Vagina for females and Urethra for males
- •Symptoms
  - •No symptoms
  - •Irritation
  - •Discharge
  - •Burning after urination
- ullet7.4 million women are infected with Trichomoniasis in the US each year
- •Testing/Diagnosis
  - •Laboratory Test
- •Treatment
  - Metronidazole
  - •Tinidazole
- Prevention
  - Abstinence
  - Consistent and Correct condom use
  - •Know your and your partner's STD status
- •Trichomoniasis is <u>not</u> a reportable infection in Wyoming





### Other STDs

#### Pubic Lice "Crabs"

- •Parasitic insects found on the genital area of humans spread through sexual contact
- Symptoms
  - •Itching in the genital area
  - •Visible lice eggs or lice in the pubic hair
- •Diagnosis
  - •Finding lice in the pubic area
- •Treatment
  - •Pubic lice can be treated with a lice-killing lotion
- Prevention
  - •Do not have sex with an infected person
  - Wash bedding and clothing
  - Do not share clothing
  - •Get examined if you believe you have come in contact with pubic lice
- •Pubic lice is **NOT** a reportable condition in Wyoming





### References

Center for Disease Control and Prevention. (2011, November 17). Sexually Transmitted Diseases. www.cdc.gov/std